

AMENDMENT TO THE SPECIFICATION

Please replace the abstract of the present application with the following abstract:

A system and method for detecting the presence of a transmitted waveform in a high noise environment. The system and method can detect and classify a modulated waveform without first demodulating the single signal, and can detect and classify a waveform having a frequency offset without compensating for the frequency offset.

Please replace the second full paragraph on page 5 of the specification with the following paragraph:

Because of the repetition of the known data blocks, a signal which is delayed one ~~repetition~~ repetition sequence and combined with the undelayed signal will produce a peak corresponding to the reinforcement of the known data blocks of the respective signals. Thus, for the waveform of Figure 1, a correlation technique that delays the received waveform by $R \times (N_k + N_u)$ symbols will generate a peak that can be used in a detection algorithm. A simple threshold test can be applied to the output of the correlator to determine if an expected waveform is present.

Please replace the last paragraph on page 7 continuing to page 8 of the specification with the following paragraph:

Detector 205 evaluates the received peak correlation value from the signal correlator 200 and determines if peak correlation value is within a small target window, e.g., 4-10 symbols, of its expected value for the expected waveform. Detector 205

~~receives~~ receives a noise signal from the noise correlator 201 which is representative of the background noise and determines if the peak value is greater than the background noise value measured by the noise correlator 201. If the peak value is within the target window and greater than the background noise, presence of the expected waveform is declared. Note that both the presence of and the type of waveform is determined without the necessity of demodulating the input signal.

Please replace the first full paragraph on page 10 of the specification with the following paragraph:

Some HF waveforms employ a known sequence which is generated by the repetition of a smaller maximal length sequence (MLS). The output from the signal correlator 200 for this type of waveform has three peaks, with the first and third being less than the center peak. In another ~~embodiment~~ embodiment of applicant's disclosure, a three-tap combining filter combines the energy from these three peaks to enhance the detection capability of the detectors. The filter may be an N-tap combining filter (where N is greater than or equal to 1). The value of N should be selected to match the particular properties of the autocorrelation function of the expected waveform.